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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,873	04/15/2004	Shannon V. Davidson	064747.1016	7114
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BAKER BOTTS LLP 2001 ROSS AVENUE 6TH FLOOR DALLAS, TX 75201-2980			EXAMINER GOODCHILD, WILLIAM J	
			ART UNIT 2445	PAPER NUMBER
			NOTIFICATION DATE 01/14/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/824,873	Applicant(s) DAVIDSON, SHANNON V.	
	Examiner WILLIAM J. GOODCHILD	Art Unit 2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/14/2009, 10/20/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7-11, 14-18 and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck et al., (US Patent No. 6,691,165), (hereinafter Bruck), and further in view of Craddock et al., (US Publication No. 20030005039), (hereinafter Craddock).

Regarding claims 1, 8 and 15, Bruck discloses collecting dynamic status information on each of at least a subset of a plurality of nodes [Bruck, column 19, lines 57-60 and figure 12]; generating a plurality of graphical elements that convey at least some of the dynamic status information [Bruck, column 20, lines 20-26 and figure 12]; and communicating at least some of the graphical elements for display to a user [Bruck, figure 12], the display presenting at least one job space within at least one virtual cluster of nodes [Bruck, figure 12, column 20, lines 47-65], the job space dynamically allocated

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to complete at least on job [Bruck, figure 12, column 20, lines 47-65].

Bruck does not specifically disclose each node comprising a switching fabric integrated to a card and at least two processors integrated to the card.

However, Craddock discloses a switching fabric with a plurality of processors interfaced to a card which is integrated to a switching fabric [Craddock, figure 6, paragraph 58 and figure 1, paragraphs 21, 23-24 and 27].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a cluster of processors connected to a card in order to monitor the attached nodes.

Regarding claims 2, 9 and 16, Bruck-Craddock further discloses wherein the display presents at least two job spaces within the at least on virtual cluster, each job space allocated to respective jobs [Bruck, figure 12, column 20, lines 47-65, shows multiple job spaces].

Regarding claims 3, 10 and 17, Bruck-Craddock further discloses dynamic status information on a node indicates a physical status of the node [Bruck, column 8, lines 40-67]; and

the physical status of the node comprises one or more of:

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processor utilization; memory utilization; physical location; IP address; or bandwidth
[Bruck, column 8, lines 40-67].

Regarding claims 4, 11 and 18, Bruck-Craddock further discloses wherein at least some of the graphical elements collectively enable a view of a topology of at least the subset of the nodes, the switching fabrics of the nodes enabling the topology [Bruck, figures 12-13].

Regarding claims 7, 14 and 21, Bruck-Craddock further discloses receiving a notification of a failure of one of the plurality of the nodes [Bruck, column 2, lines 40-52]; and
updating the view of the topology based on the notification [Bruck, column 19, lines 53-60].

Regarding claims 22-24, Bruck-Craddock further discloses wherein each card is a motherboard [Bruck, figure 6]; and
comprises at least two host channel adapters [Craddock, figure 1, items 118 and 120].

Regarding claims 25-27, Bruck-Craddock further discloses at least two first processors integrated to a first card and operable to communicate with each other via a direct link between them [Craddock, figure 6, paragraph 58 and figure 1, paragraphs 21, 23-24 and 27]; and

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a first switch integrated to the first card [Craddock, figure 6, paragraph 58], the first processors communicably coupled to the first switch [Craddock, figure 6, paragraph 58], the first switch operable to communicably couple the first processors to six or more second cards each comprising at least two second processors integrated to the second card and a second switch integrated to the second card operable to communicably couple the second processors to the first card and at least five third cards each comprising at least two third processors integrated to the third card and a third switch integrated to the third card [Craddock, paragraph 21, any number of nodes (consisting of processors and HCA's connected to the switch fabric)]; the first processors being operable to communicate with particular second processors on a particular second card via the first switch and the second switch on the particular second card [Craddock, figure 6, paragraph 58 and paragraph 21];

the first processors being operable to communicate with particular third processors on a particular third card via the first switch, a particular second switch on a particular second card between the first card and the particular third card, and the third switch on the particular third card without communicating via either second processor on the particular second card [Craddock, figure 6, paragraph 58 and figure 1, paragraphs 21, 23-24 and 27]; and

a client operable to: collect dynamic status information on each of at least a subset of the nodes [Bruck, column 19, lines 57-60 and figure 12];

generate a plurality of graphical elements that convey at least some of the dynamic status information [Bruck, column 20, lines 20-26 and figure 12]; and

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communicating at least some of the graphical elements for display to a user, the display presenting at least one job space within at least one virtual cluster of nodes, the job space dynamically allocated to complete at least one job [Bruck, column 20, lines 20-26 and 47-65 and figure 12].

3. Claims 5-6, 12-13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck-Craddock as applied to claims 4, 11 and 18 above, and further in view of Neiman et al., (US Publication No. 2003/0154112), (hereinafter Neiman).

Regarding claims 5, 12 and 19, Bruck-Craddock further discloses updating the view of the topology based on the dynamic allocation of the particular subset [Bruck, figures 12-13 and column 20, lines 20-26].

Bruck-Craddock does not specifically disclose receiving a job submission from the user, the job submission comprising at least one parameter;
communicating the job submission to a job scheduler for dynamic allocation of a particular subset of the nodes to the job submission

However, Neiman discloses a job submission [Neiman, paragraph 86, users enter job request with parameters for a certain number of nodes for their job request] and the scheduler determining from the parameters a priority of the request and determining the allocation of the nodes [Neiman, paragraph 86].

It would have been obvious to one having ordinary skill in the arts at the time the invention was made to include a job submission and allocation of nodes in order to provide for a determination of which nodes can be allocated to a user.

Regarding claims 6, 13 and 20, Bruck-Craddock-Neiman further discloses communicating an interactive command to the job scheduler to increase a size of the particular subset [Neiman, paragraph 86, submit a new request with priority]; and updating the view of the topology based on the notification [Bruck, figures 12-13 and column 20, lines 20-26].

Response to Arguments

4. Applicant's arguments filed 09/25/2009 have been fully considered but they are not persuasive.

A – Applicant argues “The Office Action fails to support the rejection of Claim 1 because the Bruck-Craddock combination fails to disclose, teach, or suggest, expressly or inherently, each element recited in Claim 1. For example, the Bruck-Craddock combination fails to disclose, teach, or suggest "communicating at least some of the graphical elements for display to a user, the display presenting at least one job space within at least one virtual cluster of nodes, the job space dynamically allocated to complete at least one job" as recited in Claim 1. The Office Action relies on Bruck with

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respect to this portion of Claim 1. (Office Action, p. 3). Bruck generally discloses a load balancing server system. (Bruck, Abstract). In particular, the cited portions of Bruck disclose a screen area showing the "status of a single machine in the distributed server cluster", "four virtual IP addresses for the machine being monitored", and "the current byte traffic load being handled by the machine." (Bruck, col. 19, 11. 57-60; col. 20, 11.7-10; col. 20, 11.47-49). However, merely displaying IP traffic loads for virtual IP addresses of a single machine does not disclose, teach, or suggest a display "presenting at least one job space within at least one virtual cluster of nodes" as recited in Claim 1. (Emphasis added). Furthermore, merely displaying IP traffic loads of a single machine does not disclose, teach, or suggest "communicating at least some of the graphical elements for display to a user, the display presenting at least one job space within at least one virtual cluster of nodes, the job space dynamically allocated to complete at least one job" as recited in Claim 1. The cited portion of Craddock fails to cure this deficiency of Bruck. Accordingly, the Bruck-Craddock combination fails to disclose, teach, or suggest each element of Claim 1. For at least this reason, Applicant respectfully requests reconsideration and allowance of Claim 1. For reasons analogous to those stated above with respect to Claim 1, Applicant respectfully requests reconsideration and allowance of Claims 8, 15, and 25-27. Claims 2-7, 9-14, and 16-24 depend from independent Claims 1, 8, and 15 shown above to be allowable. In addition, these claims recite further elements that are not taught, suggested, or disclosed by the cited references. For example, the Office Action fails to support the rejection of Claim 2 because the Bruck-Craddock combination fails to disclose, teach, or suggest, expressly

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or inherently, "wherein the display presents at least two job spaces within the at least one virtual cluster, each job space allocated to respective jobs" as recited in Claim 2. As shown above, the cited portions of Bruck merely disclose displaying IP traffic loads of a single machine. (Bruck, col. 19, 11.57-60; col. 20, 11.7-10; col. 20, 11.47- 49). However, displaying IP traffic loads of a single machine does not disclose, teach, or suggest "wherein the display presents at least two job spaces within the at least one virtual cluster, each job space allocated to respective jobs" as recited in Claim 2.”.

A – Bruck discloses a virtual cluster [Bruck, column 20, lines 7-10] and at least two job spaces [Bruck, column 20, lines 23-40, Bruck shows that the virtual machines can perform load balancing (a job) between each of the machines if one or more machines are added or should fail or be taken off-line, each of the virtual machines can be set to automatically perform the load balancing].

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Examiner's Note: Examiner has cited particular paragraphs / columns and line numbers in the reference(s) applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the cited passages as taught by the prior art or relied upon by the examiner.

Should applicant amend the claims of the claimed invention, it is respectfully requested that applicant clearly indicate the portion(s) of applicant's specification that support the amended claim language for ascertaining the metes and bounds of applicant's claimed invention

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM J. GOODCHILD whose telephone number is (571)270-1589. The examiner can normally be reached on Monday - Friday / 8:00 AM - 4:00 PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WJG

01/04/2010

/Rupal D. Dharia/

Supervisory Patent Examiner, Art Unit 2400